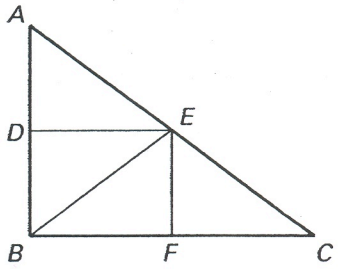
5.2 Practice A

NAME _____ DATE _____

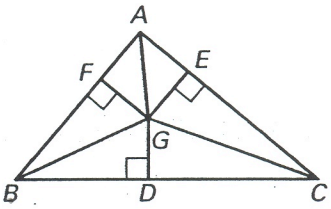
For use with pages 272–278

Use the diagram shown. *E* is the circumcenter of $\triangle ABC$.



1. $\overline{DA} \cong$?
2. $\overline{EA} \cong$?
3. $\angle EFC \cong$?
4. $\overline{BE} \cong$? and ?
5. If $AD = 6$, $BF = 8$, and $CE = 10$, what is the perimeter of $\triangle ABC$?

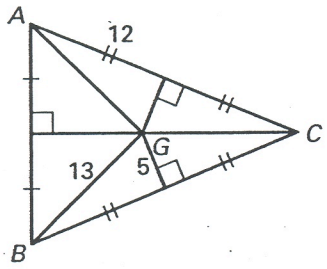
Use the diagram shown. *G* is the incenter of $\triangle ABC$.



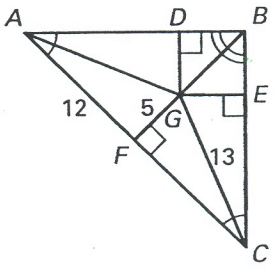
6. $\angle GCA \cong$?
7. $\angle ABG \cong$?
8. $\angle GEC \cong$?
9. $\overline{GD} \cong$? and ?
10. What method could be used to prove $\triangle GFA \cong \triangle GEA$?

Find the indicated measure in each exercise.

15. The perpendicular bisectors of $\triangle ABC$ meet at point G. Find GA.

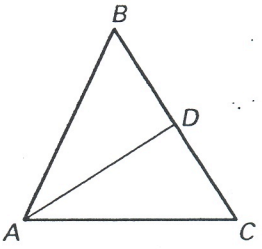


16. The angle bisectors of $\triangle ABC$ meet at point G. Find GD.



5.3 PrA

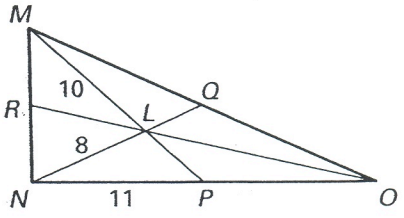
Use the diagram shown and the given information to decide in each case whether $\overline{AD}$ is a *perpendicular bisector*, an *angle bisector*, a *median*, or an *altitude* of $\triangle ABC$.



1. $\overline{DB} \cong \overline{DC}$
2. $\angle BAD \cong \angle CAD$
3. $\overline{DB} \cong \overline{DC}$ and $\overline{AD} \perp \overline{BC}$
4. $\overline{AD} \perp \overline{BC}$
5. $\triangle BAD \cong \triangle CAD$

Use the figure shown and the given information.

L is the centroid of $\triangle MNO$, $NP = 11$, $ML = 10$, and $NL = 8$.



6. Find the length of $\overline{PO}$.
7. Find the length of $\overline{MP}$.
8. Find the length of $\overline{LQ}$.
9. Find the length of $\overline{NQ}$.
10. Find the perimeter of $\triangle NLP$.

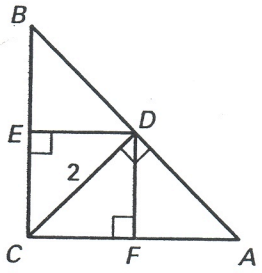
5.2 Practice B

NAME _____ DATE _____

For use with pages 272–278

Use the diagram shown. *D* is the circumcenter of $\triangle ABC$.

1. Find the length of DA.
2. Find the length of AB.
3. Explain why $\triangle ADF \cong \triangle BDE$.

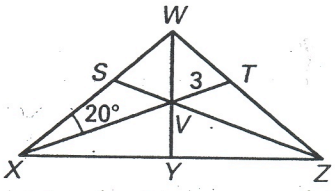


$DC = 2$

$\overline{AC} \cong \overline{BC}$

Use the diagram shown. *V* is the incenter of $\triangle XWZ$.

4. Find the length of VS.
5. Find the $m\angle SZX$.
6. Explain why $\triangle XSV \cong \triangle ZTV$.



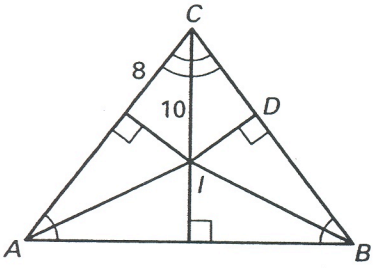
$VT = 3$

$\overline{XW} \cong \overline{WZ}$

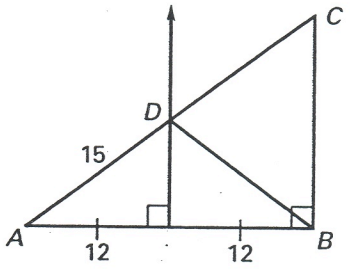
$m\angle WXT = 20°$

Find the indicated measure in each exercise.

13. Find ID.



14. Find BD.



5.3B

Use the diagram shown and the given information to match the type of special segment with the correct segment.

$\angle BAE \cong \angle EAC$ and $\overline{BF} \cong \overline{FC}$

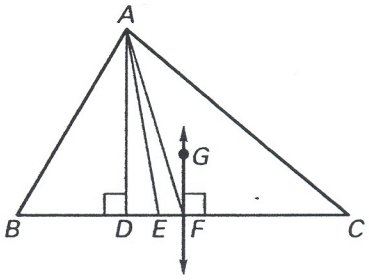
1. median
2. altitude
3. perpendicular bisector
4. angle bisector

A. $\overline{AD}$

B. $\overline{AE}$

C. $\overline{AF}$

D. $\overline{GF}$



Use the figure shown and the given information.

C is the centroid of $\triangle XYZ$, $YK = 5$, $XC = 8$, $YI = 9.6$ and $\overline{XK} \perp \overline{YZ}$.

5. Find the length of $\overline{CK}$.
6. Find the length of $\overline{XK}$.
7. Find the length of $\overline{YC}$.
8. Find the length of $\overline{KZ}$.
9. Find the length of $\overline{JZ}$.
10. Find the perimeter of $\triangle XYZ$.